Del Amo Proposed Superfund Site

United States Environmental Protection Agency, Region IX, San Francisco

Torrance, California

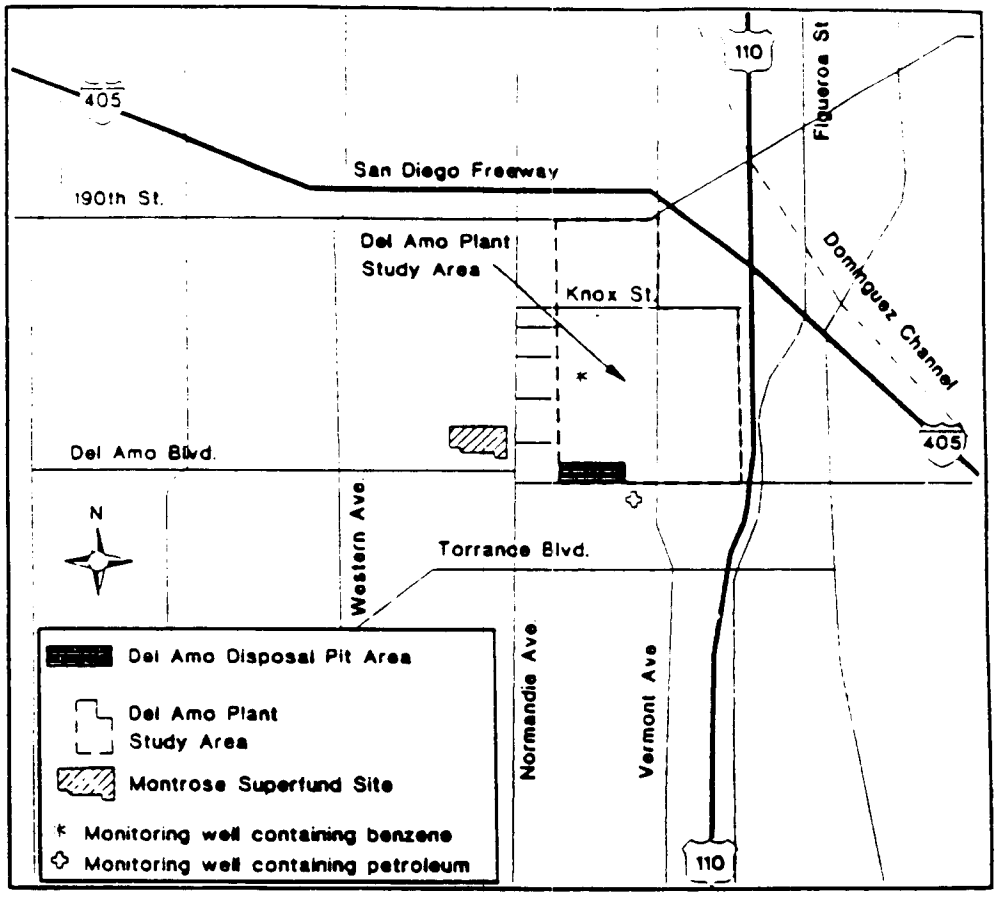
May 1992

EPA Reaches Agreement at Del Amo Site Sampling Program to Begin

The purpose of this fact sheet is to update you on current activities at the Del Amo site. On May 7, 1992, the U.S. Environmental Protection Agency (EPA) signed an agreement with Shell Oil Company (Shell) and the Dow Chemical Company (Dow), whereby the two companies agreed to investigate contamination at the Del Amo site located in Los Angeles, California (see Figure).

This investigation is an extension of work at the site which was started by the California Department of Toxic Substances Control (DTSC). The EPA investigation will cover a larger area than the original state investigation. Recent field work at the site began during the week of May 11, 1992 in a residential area south of the site (bordered by Normandie Ave. on the east, Vermont Ave. on the west, Del Amo Blvd. on the north and Torrance Blvd. on the south).

This fact sheet briefly summarizes the site history, describes known contamination at the site, outlines work at the site in the near future, provides a number to call for questions regarding the site, and includes a mailing coupon which you can use to add your name to the site mailing list in order to receive future updates on the site.



Area map of the Del Amo site and Montrose Superfund site

SITE HISTORY

In 1942, the U.S. Government constructed a facility, located on about 280 acres of land, to produce synthetic rubber. This facility actually consisted of three separate plants; two of the plants were used to manufacture raw materials for the rubber making process, and the third was used to combine the materials to produce the synthetic rubber. From 1942 to 1955, the plants were operated for the government by private companies, including Shell, Dow and several others. In 1955, the facility was sold to Shell, which operated the facility through 1969. In 1972, the facility was dismantled and the property sold to a development company. Most of the area where the synthetic rubber manufacturing facility was located has since been developed as an industrial park.

In 1985, DTSC began investigating contamination of a 3.7-acre portion of the site where disposal areas were known to exist (see Figure). These disposal areas consisted of three evaporation ponds and six disposal pits where certain wastes generated at the facility were disposed. One of the evaporation ponds was

excavated by the landowner during the mid-1980s. In 1988, Shell, Dow and G.P. Holdings (one of the development companies) reached an agreement with DTSC where the companies agreed to perform an environmental investigation of the disposal areas.

In July 1991, EPA proposed the Del Amo site to be added to EPA's National Priorities List (NPL), a list of the nation's most hazardous sites. Shortly after that, the DTSC turned over regulatory responsibility for the site to EPA. The boundaries of the proposed Superfund site have not yet been defined; however, the area to be studied will include the 280 acres where the rubber manufacturing facility was located and any other areas where site-related contamination exists.

INVESTIGATION RESULTS TO DATE

Previous sampling conducted within the 3.7-acre disposal area confirmed the presence of soil and groundwater contamination. Waste and soil in the disposal areas contain high concentrations of chemicals known as polynuclear aromatic hydrocarbons (including styrene, anthracene and naphthalene) and volatile organic compounds (VOCs), including benzene, ethylbenzene and toluene. These chemicals are by-products of the synthetic rubber manufacturing process. Many of the compounds are known or suspected cancer causing chemicals (carcinogens).

The shallow groundwater beneath the site is contaminated by VOCs and other chemicals. At least one groundwater monitoring well on the Del Amo site (see Figure for location) has nearly pure benzene floating on the water table. Another monitoring well to the south of the disposal area (see Figure for location) has petroleum floating on the water table. The water table beneath the site is typically present at a depth of 60 to 70 feet below the ground surface. Furthermore, groundwater contaminated with chlorobenzene and other chemicals from the Montrose Chemical Company Superfund site (see Figure for location), has merged with contamination from the Del Amo site.

During February 1992, EPA conducted a survey of sewer lines and storm drains to confirm that gases at combustible levels were not present.

Shallow groundwater in the vicinity of the site is not used as a drinking water source. Drinking water wells in the area do not appear to be impacted by the Del Amo site. Furthermore, investigations conducted so far indicate that the Del Amo site, in its present undisturbed condition, has a low air quality impact on the surrounding area.

WORK AGREEMENT

Under the agreement reached with EPA, Shell and Dow will perform several tasks at the site under EPA oversight. EPA has identified two separate study areas. One is a 3.7-acre area where disposal pits were located and the other study area is the entire 280-acre parcel where the rubber manufacturing facility was located as well as other areas where site related contaminants may exist:

- Shell and Dow will complete a Focused Feasibility Study which will evaluate cleanup options for the 3.7-acre disposal area. This Feasibility Study, which will use information from the investigation started by the State as well as additional information to be collected during this study, is expected to be completed in about 1 ½ - 2 years. Following the study, a cleanup remedy will be selected.

- Shell and Dow will also begin a Remedial Investigation which will look at the type and extent of soil and groundwater contamination associated with the area occupied by the rubber manufacturing facility. The Remedial Investigation will be conducted in several phases:

  1. The first phase will focus on areas of known soil and groundwater contamination. One priority is to identify the source and extent of the floating benzene product.

  2. The second phase of the Remedial Investigation will focus on identifying other areas of contamination and further defining the nature and extent of contamination. The Remedial Investigation is expected to be completed in about 2 ½ years.

Shell and Dow will also perform a Feasibility Study, which will evaluate cleanup alternatives for the entire site. The Feasibility Study is expected to be completed in about three years. Remedy selection will occure after this sudy is complete.

Based on the results of the Remedial Investigation, EPA will conduct a Risk Assessment to evaluate the threats to human health and the environment posed by the site. The Risk Assessment is scheduled to be completed in about two years.

UPCOMING FIELD WORK

During the week of May 11, 1992, Shell and Dow began field work at the site. Contractors will conduct an investigation of the petroleum found in a monitoring well south of the site. The objective of this investigation, which is expected to take 3 - 4 months to complete, is to assess the source and chemical nature of the petroleum. The investigation will involve taking groundwater samples, soil samples, and soil

gas samples. A small sampling truck will be used to collect some of these samples. We expect all sampling to be done within public streets and right-of-ways, and don't expect to need access to private property.

EPA doesn't anticipate safety problems. However, a safety plan has been developed to respond to hazardous releases, should they occur. As a worker safety precaution, it is standard practice for all personnel working on-site to wear appropriate protective clothing.

MONTROSE CHEMICAL COMPANY SUPERFUND SITE

The Montrose Chemical Company Superfund site is located next to the Del Amo site (See Figure 1). The Remedial Investigation and the Feasibility Study for the Montrose site is nearing completion. Extensive groundwater and soil contamination by chlorobenzene and DDT, among other chemicals, exist at this site. EPA is currently looking at ways to coordinate the cleanup of the Del Amo and Montrose sites.

COMMUNITY RELATIONS INTERVIEWS

EPA is planning to informally interview a variety of community members in June. Our objective is to listen to your concerns and issues about the Del Amo and Montrose sites in order to help us communicate better with you when planning fact sheets and meetings.

If you are interested in being interviewed, please contact Andy Bain on our toll free number: (800) 231-3075 or write him at the address listed below for more information.

Technical Assistance Grants (TAG): A Community Relations Opportunity

EPA has a community relations activity called the Technical Assistance Grants (TAG) Program. The purpose of the TAG Program is to assist community groups in interpreting technical information. Under this program, one eligible group at each Superfund site may obtain one grant of up to $50,000 in federal funds to provide technical assistance in understanding site documents. To be eligible, a group must be:

- Incorporated;
- Able to meet a 20% matching funds requirement (in-kind contributions - i.e., donated goods and services are permissible), or obtain a waiver of this requirement;
- Capable of preparing a plan to use technical assistance based on the schedule for preparing cleanup plans and carrying out the clean-up activities.

For more information about TAG, contact Andy Bain at 1-800/231-3075 and leave a message. He will return your call.

MAILING LIST

If you did not receive this Del Amo fact sheet in the mail and would like to be on our permanent site mailing list, please fill out and return this coupon to Andy Bain, U.S. EPA, Community Relations Coordinator, 75 Hawthorne Street, (H-1-1), San Francisco, CA 94105-3902

Name: _____

Address: _____

City/State/Zip Code: _____

FOR MORE INFORMATION

EPA encourages public input about the work we're doing. If you have questions or concerns regarding the Del Amo or Montrose site, please contact:

Andy Bain (H-1-1)	Tom Dunkelman (H-7-1)	Nancy Woo (H-7-1)	Paula Bruin (E-2)
Community Relations Coordinator	Del Amo Project Manager	Montrose Project Manager	Media Contact
(415) 744-2184	(415) 744-2395	(415) 744-2394	(415) 744-1587

or leave a message on EPA's toll-free line: (800) 231-3075 and we will return your call as soon as possible. You may also choose to write anyone of us at this address (include the code next to our name):

U.S. EPA
75 Hawthorne St.
San Francisco, CA 94105

United States Environmental Protection Agency
Region 9
75 Hawthorne Street (H-1-1)
San Francisco, CA 94105
Attn: Andy Bain

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Permit No. G-35

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Penalty for Private Use,
$300

Look for recycling symbols on products you buy. Such symbols identify recycled or recyclable products. Support recycling markets by buying products made from recycled material.

TRADUCCION ADENTRO: ACUERDO PARA ESTUDIAR CONTAMINACION EN EL SITIO "DEL AMO".

INSIDE: Investigation Agreement for Del Amo Superfund site

DEL AMO / MONTROSE SITES

DHS ANNOUNCES HEALTH STUDY RESULTS

RELEASED BY EPIDEMIOLOGICAL STUDIES SECTION
OF THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES
JANUARY 1988

The Epidemiological Studies and Surveillance Section of the California Department of Health Services has completed its health study of people in Los Angeles who live near the Del Amo and Montrose hazardous waste sites. The study was undertaken to see if people living near the waste sites have experienced health problems that might be related to chemicals released from these sites.

The study obtained information from 1038 adults and 450 children living in the neighborhood near the Montrose site. Their health was compared with the health of adults and children living in two areas to the southwest, one about two miles away and the other about five miles away.

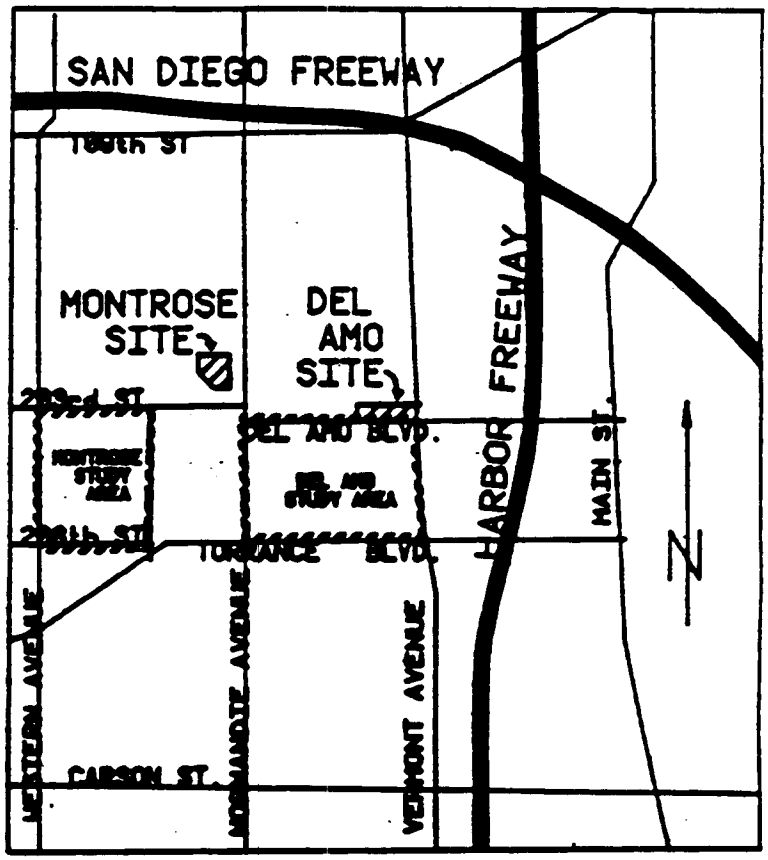
The questions and answers that follow summarize the major findings of the health study. However, if you would like more details, including health effects associated with chemicals found at these sites, the full report is available at the following libraries:

Torrance Public Libra
3301 Torrance Blvd.
Torrance, CA 90503

Carson Library, Main
151 E. Carson Street
Carson, CA 90745

Villa Carson Library
23317 S. Avalon Blvd.
Carson, CA 90745

Wilmington Branch Library
309 W. Opp
Wilmington, CA 90744



MEETING

We will hold a community meeting in the auditorium of Van Dean Elementary School, 826 W. Javelin, Torrance, CA 90502 on Thursday, February 25th, 1988 at 7:00 PM. The purpose of the meeting is to review the study and answer questions you may have regarding health effects related to living near the Del Amo or Montrose Hazardous waste sites. This meeting is neither sponsored by nor is it in any way connected with the Los Angeles Unified School District.

Overview of the Study Design

Q: What was the purpose of the study?
A: The purpose was to evaluate the current health experience of people in these neighborhoods as compared to that of a similar group of people elsewhere. The study was not designed to answer questions about from these neighborhoods, or to assess any possible future health effects that might arise from living near these sites. While these are important issues, they are very complicated to study and there-fore, they would be pursued as secondary studies, if warranted. The results of the present study do not lead the Department to believe that additional studies are needed at this time.

QUESTIONS AND ANSWERS ABOUT THE HEALTH STUDY AND ITS RESULTS

Q: How were people selected to be in the study?
A: People were selected if they lived in neighborhoods near either the Del Amo or Montrose sites. Thus, all households within an approximate one-half mile area directly south of the Del Amo site and those within a similar area to the south-southwest of the Montrose site were invited to participate in the study.

Using information obtained from the household interviews, the health status of these participants was compared with that of people living several miles southeast of the sites. Thus, the health status observed in the comparison group serves as a reference to tell us what the health level we should expect to see in the Del Amo and Montrose areas. The comparison group was selected based on its similarity to the Del Amo and Montrose study groups in terms of family income, ethnicity and general environment.

Q: How many of the households you attempted to contact actually participated in the study?
A: Over 1900 households were contacted in the three areas but not everyone decided to participate in the study. We obtained completed questionnaires for 444 (65%) of the households in the Del Amo area, 436 (71.4%) in the Montrose area, and 406 (63%) in the control area.

Q: What health information did you ask about?
A: The questionnaire asked about cancer, pregnancy outcomes, liver problems, and 16 different symptoms that might indicate some effect of chemical exposure, such as headache, sore eyes, and trouble sleeping. We also asked about age, ethnicity, life style habits (such as smoking and alcohol consumption), concern about environmental problems, and odor detection, because these factors can affect health or perceptions of health.

Cancer Findings

Q: Was there a difference in the amount of cancer reported in the Del Amo or Montrose neighborhoods and in the comparison neighborhood?
A: On the average, residents had lived in the study area for only 6 years; since the lag time between exposure and the appearance of environmentally-caused cancers is generally 15 to 20 years, we would not expect this survey to detect increased cancer rates from the exposures being studied. Indeed, the rate of malignant cancers in the Del Amo area was about half that in either the Montrose or the comparison areas. Rates in all three areas were also lower than would be expected based on information from the National Cancer Institute.

Pregnancy Outcomes

Q: You asked several questions about pregnancy outcomes and fertility problems. Were there any differences between the study areas and the comparison area?

A: The rates of adverse pregnancy outcomes such as miscarriages, birth defects and low birthweight were generally similar across the Del Amo, Montrose and comparison areas, although the rates for miscarriages and low birthweight were lower in the Montrose area than in the other two. The levels observed for all of these outcomes are within the range expected based on other studies in California as well as those in other parts of the country.

Liver Problems

Q: Why did you ask about liver problems? What did you find out?

A: We asked about liver problems because exposure to the types of chemicals at the Del Amo and Montrose hazardous waste sites can, at very high levels, cause liver disease. Among the Del Amo and Montrose study participants, 20 cases of liver disease were reported to have occurred after individuals moved to their current addresses: 11 in Del Amo and 9 in Montrose. No liver problems were reported for children living in these areas.

The number of reports of liver disease was greater than expected. For example, if residents of the study neighborhoods had the same frequency of liver problems in the control areas, we would have expected to see about 5 cases in each of the areas. A difference of the size observed, though, could have occurred by chance. Also, the diseases reported did not reflect any single type of liver problem and therefore, all cases probably did not have a common cause. Nevertheless, we are in the process of obtaining medical records from these individuals so that we can confirm the diagnoses.

In doing the liver disease analysis we also looked for other possible risk factors in addition to living near the sites. We found that self-reported exposure to organic chemicals was the factor most strongly associated with liver disease; however, we do not have information about whether these reported exposures occurred at the workplace or at home.

Other Health Results

Q. Did people living in the Del Amo or Montrose neighborhoods report more symptoms than the comparison area residents?

A: Regardless of area, most people (65 to 80%) did not report developing symptoms since living in their current homes. Among those who did, people in the Del Amo area on the average reported 3 of the 16 symptoms, compared to an average of 2 symptoms reported by people in the Montrose and comparison areas.

Q: Which symptoms were elevated in the Del Amo and Montrose neighborhoods?

A: Irritation of the skin, eyes and throat were the symptoms that were consistently elevated in the Del Amo and Montrose areas as compared to the comparison group. The increase was most pronounced among Del Amo area residents where,of the 1038 persons who participated, there were 30 to 70 more people reporting each of these symptoms than we would have expected; about 10 to 20 additional cases of each symptom were reported in the Montrose area. Similar results were found in children living in each of the study areas.

Q: Was there a relationship between smelling odors and experiencing symptoms?

A: Some symptoms, for example, headaches, throat soreness, and sinus congestion tended to be elevated only among people who detected odors in their neighborhoods. Also, in the Del Amo and Montrose areas, those who noticed odors were the only ones who reported a greater total number of symptoms. The most frequent types of odors reported were sewer, chemical, refinery, dumpsite and factory odors.

However, other symptoms showed elevations regardless of reported odor detection. These symptoms included skin rash, eye irritation, and earache. This suggests that odor by itself may be responsible for some, but not all, of the health problems reported.

Q: You asked about other health problems people may have experienced since living at their current residences. Were there differences between the study neighborhoods and the comparison neighborhoods in the reporting of these other problems?

A: People in all three study areas tended to report the same kinds of problems, and indeed, the levels of these problems were not statistically different across the areas. Frequently reported health conditions included respiratory infections, heart disease, digestive system problems, and accidents, although illnesses related to all the major body systems were reported by some.

Q: How did people perceive their overall health?

A: About 80% of the people in each area were reported to be in good or excellent health at the time of the study. However, slightly more people in the Del Amo and Montrose areas, 19% and 17% respectively, reported fair or poor health as compared to 15% in the comparison area. Also, 15% of the people in the Del Amo area, and 12% in the Montrose area said that their health had declined since moving to their current addresses, compared to 9% in the comparison area. The differences between the study and comparison areas represent about 70 more people than expected in Del Amo, and 25 more in Montrose feeling that their health had declined.

Analysis of the study data also showed that people's perceptions of their overall health were related to the number of symptoms they reported. This indicates that their symptoms have a direct effect on people's sense of well-being.

Other Concerns

Q: Since one person in each household provided information on everyone in the household, could the actual amount of illness have been underestimated because the respondent was unaware of another's health problems?

A: While this is possible, we do not believe it occurred. If the person who was actually interviewed had not known about the health of the people in the household, we would expect to see a difference in health effects among respondents and members of their households. In fact, we compared these, and the level of health effects was very similar in the two groups and thus, we assumed that the person who was interviewed was aware of the health of others in the household.

Conclusions

Q: Briefly, what are your conclusions from the study?

A: It is our conclusion that, as of the time the survey took place, people living near the Del Amo and Montrose hazardous waste sites have not experienced medical problems such as cancer, mortality , or adverse pregnancy outcomes at levels greater than we would have expected.

However, people do seem to be affected by several conditions which may be related to the irritant properties of local airborne pollutants. The finding that some of the symptoms showed elevations only among people detecting odors suggests that besides the physiologic effect of environmental pollutants, reactions to odors may be the source of, or a contributor to, increased symptom reports.

Regardless, we would expect that these conditions are transient in nature, that is, in the absence of the exposure, the problem would go away. We must also point out, however, that the lack of adequate offsite monitoring does not permit us to determine whether chemicals from the Del Amo or Montrose sites, or other pollutants common to this industrialized area, are the source of the symptoms.

For More Information

If you have any questions about the health study, please contact:

Dr. Kenneth Satin
California Department of Health Services
Epidemiological Studies and Surveillance Section
2151 Berkeley Way,
Berkeley, CA 94704 Phone (415) 540-2669

DEL AMO / MONTROSE SITES: HEALTH EFFECTS STUDY, 1984

Summary of Major Health Findings

Health Conditions Associated with Living Near Del Amo and Montrose Sites:

- Sore Throats
- Eye Irritation
- Skin Irritat

Health Conditions NOT Associated with Living Near Del Amo and Montrose Sites

- Adverse Pregnancy Outcomes, such as Miscarriages, Stillbirths, Low Birth Weight, Birth Defects
- Cancer
- Liver Disease
- Death

California Department of Health Services
Epidemiological Studies and Surveillance Section
2151 Berkeley Way,
Berkeley, CA 94704

ERRATA

Pg. 1 Overview of the Study Design
Third sentence should read:

The study was not designed to answer questions about the health of people who moved away from these neighborhoods, or to assess any possible future health effects that might arise from living near these sites.

Pg. 4. "Skin Irritat " should read "Skin Irritation."

Toxic sites at center of big lawsuit

Abandoned plant made DDT

By Jim Radcliffe DAILY BREEZE
STAFF WRITER

Attorneys representing 107 Harbor Gateway residents filed a lawsuit Thursday claiming 16 companies allowed a neighborhood to become polluted, causing health problems and suppressing property values.

"There's an alarming number of people with cancer and other serious illnesses in the area," said Robert Mars, one of the lawyers who filed the case.

The lawsuit involves two industrial sites.

A World War II-era chemical plant sat on one property, near Del Amo Boulevard and Vermont Avenue, that is referred to as the Del Amo Dump. Built by the federal government, the synthetic rubber plant was operated by private contractors until closing in 1969.

The other site, the closed Montrose Chemical Corp. on Normandie Avenue, used to produce more DDT than any other manufacturer in the country and remains heavily contaminated. The plant closed in 1982 after 35 years.

The suit, filed in Los Angeles Superior Court, alleges that pollutants entered the water table or were blown onto nearby properties. The homes, the suit claims, are worth less because of the pollution.

The defendants operated businesses on the two toxic sites

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Toxic

FROM PAGE B1

or owned parts of the lots and should have quickly cleaned up the area, the suit contends.

The businesses named in the lawsuit either could not be reached Thursday or declined comment until seeing the complaint. Defendants include the Shell Oil Co., the Dow Chemical Co. and Montrose.

In May, Shell and Dow agreed to spend up to $10 million to study the pollution left behind at the dump and in an adjacent area since developed into office buildings.

Health officials have said that the DDT level found around the 13-acre Montrose site is not enough to harm most people, even if they lived nearby for 70 years.

Mars and attorney Major Langer acquired clients by mailing information explaining the intention to sue. Mars has used this strategy before to collect other clients for South Bay toxic-waste cases.

Asked how much the defendants will seek, Mars said, "$100 million is always a nice figure. This one's going to come in big."